	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
1	BRS	L1	1	calcipressins	USPAT; US-PGPUB; EPO; JPO;	2003/08/15 10:58			0
2	BRS	L2	122	csp1 or csp2 or csp3	USPAT; US-PGPUB; EPO; JPO;	2003/08/15 10:59			0
3	BRS	L3	925	calcineurin	USPAT; US-PGPUB; EPO; JPO;	2003/08/15 10:59			0
4	BRS	L4	0	2 same 3	USPAT; US-PGPUB; EPO; JPO;	2003/08/15 10:59			0
5	BRS	L5	16	dscr1 or adpt78	USPAT; US-PGPUB; EPO; JPO;	2003/08/15 11:00			0
6	BRS	L6	6	zaki-4	USPAT; US-PGPUB; EPO; JPO;	2003/08/15 11:01			0
7	BRS	L7	1	(5 or 6) same assay	USPAT; US-PGPUB; EPO; JPO;	2003/08/15 11:03			0
8	BRS	L8	10	(5 or 6) same (modulat$3 or inhibit$3 or suppress$3 or activat$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/15 11:08			0
9	BRS	L9	7	cell same 8	USPAT; US-PGPUB; EPO; JPO;	2003/08/15 11:08			0
10	BRS	L10	0	antibody same 8	USPAT; US-PGPUB; EPO; JPO;	2003/08/15 11:09			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
11	BRS	L12	0	kayako adj kimbara.in.	USPAT; US-PGPUB; EPO; JPO;	2003/08/15 11:11			0
12	BRS	L13	0	ryeom adj sandy.in.	USPAT; US-PGPUB; EPO; JPO;	2003/08/15 11:11			0
13	BRS	L11	2	mckeon adj frank.in.	USPAT; US-PGPUB; EPO; JPO;	2003/08/15 11:11			0

=> d his

(FILE 'HOME' ENTERED AT 11:49:48 ON 15 AUG 2003)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT
11:50:15 ON 15 AUG 2003

L1 24 S CALCIPRESSIN
L2 693 S CSP1 OR CSP2 OR DSCR1 OR ADPT78 OR ZAKI-4
L3 695 S L1 OR L2
L4 0 S L3 (P) (SCREEN? ASSAY)
L5 20 S L3 (P) ASSAY
L6 8 S L5 (P) (MODULAT? OR INHIBIT? OR SUPPRESS? OR ACTIVAT?)
L7 2 DUPLICATE REMOVE L6 (6 DUPLICATES REMOVED)
L8 85 S L3 (P) CELL (P) (FUNCTION OR ACTIVITY)
L9 48 S L8 (P) (MODULAT? OR INHIBIT? OR SUPPRESS? OR ACTIVAT?)
L10 15 DUPLICATE REMOVE L9 (33 DUPLICATES REMOVED)
L11 12 S ANTIBODY (P) L8
L12 3 DUPLICATE REMOVE L11 (9 DUPLICATES REMOVED)
L13 99 S MCKEON FRANK/AU
L14 0 S KAYAKO KIMBARA/AU
L15 0 S RYEOM SANDY/AU
L16 0 S L13 AND L3

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FILE 'MEDLINE' ENTERED AT 11:50:15 ON 15 AUG 2003

FILE 'CAPLUS' ENTERED AT 11:50:15 ON 15 AUG 2003
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FILE 'SCISEARCH' ENTERED AT 11:50:15 ON 15 AUG 2003
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FILE 'AGRICOLA' ENTERED AT 11:50:15 ON 15 AUG 2003

=> s calcipressin
L1          24 CALCIPRESSIN

=> s csp1 or csp2 or dscr1 or adpt78 or zaki-4
L2         693 CSP1 OR CSP2 OR DSCR1 OR ADPT78 OR ZAKI-4

=> s l1 or l2
L3         695 L1 OR L2

=> s l3 (p) (screen? assay)
L4           0 L3 (P) (SCREEN? ASSAY)

=> s l3 (p) assay
L5          20 L3 (P) ASSAY

=> s l5 (P) (modulat? or inhibit? or suppress? or activat?)
L6           8 L5 (P) (MODULAT? OR INHIBIT? OR SUPPRESS? OR ACTIVAT?)

=> duplicate remove l6
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
PROCESSING COMPLETED FOR L6
L7            2 DUPLICATE REMOVE L6 (6 DUPLICATES REMOVED)

=> d l7 1-2 ibib abs

L7   ANSWER 1 OF 2     MEDLINE on STN                    DUPLICATE 1
ACCESSION NUMBER:   2001354393     MEDLINE
DOCUMENT NUMBER:    21189752   PubMed ID: 11294245
TITLE:              Cysteine string protein expression in mammary epithelial
                    cells.
AUTHOR:             Gleave T L; Beechey R B; Burgoyne R D
CORPORATE SOURCE:   The Physiological Laboratory, University of Liverpool, UK.
SOURCE:             PFLUGERS ARCHIV. EUROPEAN JOURNAL OF PHYSIOLOGY, (2001 Feb)
                    441 (5) 639-49.
                    Journal code: 0154720. ISSN: 0031-6768.
PUB. COUNTRY:       Germany: Germany, Federal Republic of
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       Priority Journals
ENTRY MONTH:        200106
ENTRY DATE:         Entered STN: 20010625
                    Last Updated on STN: 20010625
                    Entered Medline: 20010621
AB   Cysteine string protein (Csp) is a secretory vesicle protein previously
     demonstrated to be required for Ca2+-regulated exocytosis in neurons and
     endocrine cells.  It has been suggested to function by regulating
     voltage-gated Ca2+ channels or, alternatively, to have a more direct
     effect on the regulated exocytotic machinery.  Here we demonstrate the
     expression of Csp in mammary epithelial cells and in the KIM-2 mammary
     cell line.  In KIM-2 cells, Csp was found to be associated with a
     population of small vesicles and showed partial co-distribution with the
     vesicle protein cellubrevin.  KIM-2 cells do not express detectable levels
     of voltage-gated Ca2+ channels, ruling these out as a site of action.
     Using the release of transfected growth hormone (GH) as an   ***assay***
     of secretion, we found that GH is secreted in an exclusively constitutive
     manner from KIM-2 cells.  Overexpression of   ***Csp1***
       ***inhibits***   regulated exocytosis in other cell types but has no
```

effect on constitutive GH release by KIM-2 cells. These results suggest that Csp does not have a major function in constitutive exocytosis.

L7 ANSWER 2 OF 2 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2001137938 MEDLINE
DOCUMENT NUMBER: 20571364 PubMed ID: 11123806
TITLE: A stress-induced calcium-dependent protein kinase from Mesembryanthemum crystallinum phosphorylates a two-component pseudo-response regulator.
AUTHOR: Patharkar O R; Cushman J C
CORPORATE SOURCE: Department of Biochemistry/MS200, 311B Fleischmann Agriculture, University of Nevada, Reno, NV 89557-0014, USA.
SOURCE: PLANT JOURNAL, (2000 Dec) 24 (5) 679-91.
Journal code: 9207397. ISSN: 0960-7412.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF219972
ENTRY MONTH: 200103
ENTRY DATE: Entered STN: 20010404
Last Updated on STN: 20010404
Entered Medline: 20010308
AB McCDPK1 is a salinity- and drought-induced calcium-dependent protein kinase (CDPK) isolated from the common ice plant, Mesembryanthemum crystallinum. A yeast two-hybrid experiment was performed, using full-length McCDPK1 and truncated forms of McCDPK1 as baits, to identify interacting proteins. A catalytically impaired bait isolated a cDNA clone encoding a novel protein, CDPK substrate protein 1 (***CSP1***). ***CSP1*** interacted with McCDPK1 in a substrate-like fashion in both yeast two-hybrid ***assays*** and wheat germ interaction ***assays*** . Furthermore, McCDPK1 was capable of phosphorylating ***CSP1*** in vitro in a calcium-dependent manner. Our results demonstrate that the use of catalytically impaired and unregulated CDPKs with the yeast two-hybrid system can accelerate the discovery of CDPK substrates. The deduced ***CSP1*** amino acid sequence indicated that it is a novel member of a class of pseudo-response regulator-like proteins that have a highly conserved helix-loop-helix DNA binding domain and a C-terminal ***activation*** domain. McCDPK1 and ***CSP1*** co-localized to nuclei of NaCl-stressed ice plants. ***Csp1*** transcript accumulation was not regulated by NaCl or dehydration stress. Our results strongly suggest that McCDPK1 may regulate the function of ***CSP1*** by reversible phosphorylation.

=> d his

(FILE 'HOME' ENTERED AT 11:49:48 ON 15 AUG 2003)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT 11:50:15 ON 15 AUG 2003
L1 24 S CALCIPRESSIN
L2 693 S CSP1 OR CSP2 OR DSCR1 OR ADPT78 OR ZAKI-4
L3 695 S L1 OR L2
L4 0 S L3 (P) (SCREEN? ASSAY)
L5 20 S L3 (P) ASSAY
L6 8 S L5 (P) (MODULAT? OR INHIBIT? OR SUPPRESS? OR ACTIVAT?)
L7 2 DUPLICATE REMOVE L6 (6 DUPLICATES REMOVED)

=> s l3 (p) cell (p) (function or activity)
4 FILES SEARCHED...
L8 85 L3 (P) CELL (P) (FUNCTION OR ACTIVITY)

=> s l8 (p) (modulat? or inhibit? or suppress? or activat?)
L9 48 L8 (P) (MODULAT? OR INHIBIT? OR SUPPRESS? OR ACTIVAT?)

=> duplicate remove l9
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L9
L10 15 DUPLICATE REMOVE L9 (33 DUPLICATES REMOVED)

=> d l10 1-15 ibib abs

L10 ANSWER 1 OF 15 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2002300827 MEDLINE

DOCUMENT NUMBER: 22035335 Published ID: 12039863
TITLE: The DSCR1 (Adapt78) isoform 1 protein calcipressin 1 inhibits calcineurin and protects against acute calcium-mediated stress damage, including transient oxidative stress.
AUTHOR: Ermak Gennady; Harris Cathryn D; Davies Kelvin J A
CORPORATE SOURCE: Ethel Percy Andrus Gerontology Center, and Division of Molecular and Computational Biology, University of Southern California, Los Angeles, California 90089-0191, USA.
CONTRACT NUMBER: AG16256 (NIA)
SOURCE: FASEB JOURNAL, (2002 Jun) 16 (8) 814-24.
Journal code: 8804484. ISSN: 1530-6860.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200206
ENTRY DATE: Entered STN: 20020604
Last Updated on STN: 20020611
Entered Medline: 20020607

AB Although ***DSCR1*** (Adapt78) has been associated with successful adaptation to oxidative stress and calcium stress and with devastating diseases such as Alzheimer's and Down syndrome, no rationale for these apparently contradictory findings has been tested. In fact, ***DSCR1*** (Adapt78) has not yet been proved to provide protection against acute oxidative stress or calcium stress. We have addressed this question using cross-adaptation to H2O2 and the calcium ionophore A23187, stable ***DSCR1*** (Adapt78) transfection and overexpression in hamster HA-1 ***cells*** , 'tet-off' regulated ***DSCR1*** (Adapt78) isoform 1 transgene expression in human PC-12 ***cells*** , and ***DSCR1*** (Adapt78) antisense oligonucleotides to test the ability of the ***DSCR1*** (Adapt78) protein product ***calcipressin*** 1 (a calcineurin ***inhibitor***) to protect against oxidative stress and calcium stress. Under all conditions, resistance to oxidative stress and calcium stress increased as a ***function*** of ***DSCR1*** (Adapt78)/ ***calcipressin*** 1 expression and decreased as gene/protein expression diminished. We conclude that ***cells*** may transiently use increased expression of the ***DSCR1*** (Adapt78) gene product ***calcipressin*** 1 to provide short-term protection against acute oxidative stress and other calcium-mediated stresses, whereas chronic overexpression may be associated with Alzheimer disease progression.

L10 ANSWER 2 OF 15 SCISEARCH COPYRIGHT 2003 THOMSON ISI on STN
ACCESSION NUMBER: 2002:589901 SCISEARCH
THE GENUINE ARTICLE: 570WR
TITLE: The DSCR1 (Adapt78) isoform 1 protein calcipressin 1 inhibits calcineurin and protects against acute calcium-mediated stress damage, including transient oxidative stress
AUTHOR: Ermak G; Harris C D; Davies K J A (Reprint)
CORPORATE SOURCE: Univ So Calif, Ethel Percy Andrus Gerontol Ctr, 3715 McClintock Ave, Room 306, Los Angeles, CA 90089 USA (Reprint); Univ So Calif, Ethel Percy Andrus Gerontol Ctr, Los Angeles, CA 90089 USA; Univ So Calif, Div Mol & Computat Biol, Los Angeles, CA USA
COUNTRY OF AUTHOR: USA
SOURCE: FASEB JOURNAL, (JUN 2002) Vol. 16, No. 8, pp. 814-824.
Publisher: FEDERATION AMER SOC EXP BIOL, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3998 USA.
ISSN: 0892-6638.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 41

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Although ***DSCR1*** (Adapt78) has been associated with successful adaptation to oxidative stress and calcium stress and with devastating diseases such as Alzheimer's and Down syndrome, no rationale for these apparently contradictory findings has been tested. In fact, ***DSCR1*** (Adapt78) has not yet been proved to provide protection against acute oxidative stress or calcium stress. We have addressed this question using cross-adaptation to H2O2 and the calcium ionophore A23187, stable ***DSCR1*** (Adapt78) transfection and overexpression in hamster HA-1 ***cells*** , 'tet-off' regulated ***DSCR1*** (Adapt78) isoform 1 transgene expression in human PC-12 ***cells*** , and ***DSCR1*** (Adapt78) antisense oligonucleotides to test the ability of the ***DSCR1*** (Adapt78) protein product ***calcipressin*** 1 (a

calcineurin ***inhibitor***) to protect against oxidative stress and calcium stress. Under all conditions, resistance to oxidative stress and calcium stress increased as a ***function*** of ***DSCR1*** (Adapt78)/ ***calcipressin*** 1 expression and decreased as gene/protein expression diminished. We conclude that ***cells*** may transiently use increased expression of the ***DSCR1*** (Adapt78) gene product ***calcipressin*** 1 to provide short-term protection against acute oxidative stress and other calcium-mediated stresses, whereas chronic overexpression may be associated with Alzheimer disease progression.

L10 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2003:177260 CAPLUS
DOCUMENT NUMBER: 138:349332
TITLE: Homologous recombination of mouse ZAKI-4 gene to disrupt its expression
AUTHOR(S): Kanou, Yasuhiko; Abe, Naoki; Ishida, Junji; Fukamizu, Akiyoshi; Seo, Hisao; Murata, Yoshiharu
CORPORATE SOURCE: Department of Teratology and Genetics Division of Molecular and Cellular Adaptation Research Institute of Environmental Medicine, Nagoya University, Nagoya, 464-8601, Japan
SOURCE: Environmental Medicine (2002), 46(1,2), 55-57
CODEN: ENMEE9; ISSN: 0287-0517
PUBLISHER: Nagoya University, Research Institute of Environmental Medicine
DOCUMENT TYPE: Journal
LANGUAGE: English
AB ***ZAKI*** - ***4*** ***inhibits*** the ***activity*** of calcineurin, a Ca2+-dependent protein phosphatase. From ***ZAKI*** - ***4*** gene, two isoforms, .alpha. and .beta. are generated by an alternative splicing. In adult mice ***ZAKI*** - ***4*** .alpha. mRNA was mainly expressed in brain whereas ***ZAKI*** - ***4*** .beta. mRNA was ubiquitously. To elucidate the specific ***function*** of ***ZAKI*** - ***4*** isoforms, we plan to establish ***ZAKI*** - ***4*** .beta. knock out mice by homologous recombination. For this purpose, mouse embryonic stem ***cells*** were electroporated with a targeting vector in which ***ZAKI*** - ***4*** .beta. sequence was disrupted by cDNA coding neomycin resistance. Six independent clones out of 466 antibiotics-resistant colonies underwent homologous recombination at the ***ZAKI*** - ***4*** .beta. locus. These clones will be used to establish the knock out mice.
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 15 MEDLINE on STN
ACCESSION NUMBER: 2003060426 MEDLINE
DOCUMENT NUMBER: 22458259 PubMed ID: 12225619
TITLE: Mutational analyses of the signals involved in the subcellular location of DSCR1.
AUTHOR: Pfister Sandra Cristina; Machado-Santelli Glaucia Maria; Han Sang Won; Henrique-Silva Flavio
CORPORATE SOURCE: Department of Genetics and Evolution, Federal University of Sao Carlos, Rodovia Washington Luiz km 235, Sao Carlos 13565-905, SP, Brazil.. scpfister@uol.com.br
SOURCE: BMC Cell Biol, (2002 Sep 11) 3 (1) 24.
Journal code: 100966972. ISSN: 1471-2121.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200303
ENTRY DATE: Entered STN: 20030207
Last Updated on STN: 20030316
Entered Medline: 20030314
AB BACKGROUND: Down syndrome is the most frequent genetic disorder in humans. Rare cases involving partial trisomy of chromosome 21 allowed a small chromosomal region common to all carriers, called Down Syndrome Critical Region (DSCR), to be determined. The ***DSCR1*** gene was identified in this region and is expressed preferentially in the brain, heart and skeletal muscle. Recent studies have shown that ***DSCR1*** belongs to a family of proteins that binds and ***inhibits*** calcineurin, a serine-threonine phosphatase. The work reported on herein consisted of a study of the subcellular location of ***DSCR1*** and ***DSCR1*** -mutated forms by fusion with a green fluorescent protein, using various ***cell*** lines, including human. RESULTS: The protein's location was preferentially nuclear, independently of the isoform, ***cell*** line

and insertion in the GFP's N- or C-terminal. A segment in the C-terminal, which is important in the location of the protein, was identified by deletion. On the other hand, site-directed mutational analyses have indicated the involvement of some serine and threonine residues in this event. CONCLUSION: In this paper, we discuss the identification of amino acids which can be important for subcellular location of ***DSCR1*** . The involvement of residues that are prone to phosphorylation suggests that the location and ***function*** of ***DSCR1*** may be regulated by kinases and/or phosphatases.

L10 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:822573 CAPLUS
DOCUMENT NUMBER: 138:121081
TITLE: Mutational analyses of the signals involved in the subcellular location of DSCR1
AUTHOR(S): Pfister, Sandra Cristina; Machado-Santelli, Glaucia Maria; Han, Sang Won; Henrique-Silva, Flavio
CORPORATE SOURCE: Department of Genetics and Evolution, Federal University of Sao Carlos, Sao Carlos, 13565-905, Brazil
SOURCE: BMC Cell Biology [online computer file] (2002), 3, No pp. given
CODEN: BCBMAY; ISSN: 1471-2121
URL: http://www.biomedcentral.com/1471-2121/3/24
PUBLISHER: BioMed Central Ltd.
DOCUMENT TYPE: Journal; (online computer file)
LANGUAGE: English
AB Down syndrome is the most frequent genetic disorder in humans. Rare cases involving partial trisomy of chromosome 21 allowed a small chromosomal region common to all carriers, called Down Syndrome Crit. Region (DSCR), to be detd. The ***DSCR1*** gene was identified in this region and is expressed preferentially in the brain, heart and skeletal muscle. Recent studies have shown that ***DSCR1*** belongs to a family of proteins that binds and ***inhibits*** calcineurin, a serine-threonine phosphatase. The work reported on herein consisted of a study of the subcellular location of ***DSCR1*** and ***DSCR1*** -mutated forms by fusion with a green fluorescent protein, using various ***cell*** lines, including human. The protein's location was preferentially nuclear, independently of the isoform, ***cell*** line and insertion in the GFP's N- or C-terminal. A segment in the C-terminal, which is important in the location of the protein, was identified by deletion. On the other hand, site-directed mutational analyses have indicated the involvement of some serine and threonine residues in this event. In this paper, we discuss the identification of amino acids which can be important for subcellular location of ***DSCR1*** . The involvement of residues that are prone to phosphorylation suggests that the location and ***function*** of ***DSCR1*** may be regulated by kinases and/or phosphatases.
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 15 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2001262779 MEDLINE
DOCUMENT NUMBER: 21216508 PubMed ID: 11316738
TITLE: Expression of ZAKI-4 messenger ribonucleic acid in the brain during rat development and the effect of hypothyroidism.
AUTHOR: Siddiq A; Miyazaki T; Takagishi Y; Kanou Y; Hayasaka S; Inouye M; Seo H; Murata Y
CORPORATE SOURCE: Department of Teratology and Genetics, Division of Molecular and Cellular Adaptation, Research Institute of Environmental Medicine, Nagoya University, Nagoya 464-8601, Japan.
SOURCE: ENDOCRINOLOGY, (2001 May) 142 (5) 1752-9.
Journal code: 0375040. ISSN: 0013-7227.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200105
ENTRY DATE: Entered STN: 20010521
Last Updated on STN: 20010521
Entered Medline: 20010517
AB We identified ***ZAKI*** - ***4*** (also designated as DSCR1L1) as a thyroid hormone responsive gene in cultured human skin fibroblasts. Recently it has been reported that ***ZAKI*** - ***4*** belongs to an evolutionary conserved family of proteins that ***function*** as

calcineurin ***inhibitor*** . In human, ***ZAKI*** - ***4*** and calcineurin are highly expressed in brain, where thyroid hormones play essential roles in the development during fetal and neonatal periods. In the present study, we examined the temporal and spatial expression patterns of ***ZAKI*** - ***4*** messenger RNA (mRNA) in control and hypothyroid rat brains. Northern blot analysis revealed that ***ZAKI*** - ***4*** mRNA was detected in both cerebral cortex and cerebellum as early as embryonic day (E)18. In the cerebral cortex, the expression level gradually increased with age, reaching a plateau at postnatal day (P)7 and remained constant thereafter until P30. A similar pattern of increase with age was also observed in hypothyroid rats; however, the magnitude of the increase was significantly reduced. In control rats, the fold increase in ***ZAKI*** - ***4*** mRNA level from E18 to P17 was 10.8; whereas in hypothyroid rats, it was 7.4. In cerebellum the expression level did not change with age or by thyroid status. In situ hybridization revealed that ***ZAKI*** - ***4*** mRNA is widely expressed in neurons throughout the brain. It is noteworthy that the expression in the neurons of layer VI of the cerebral cortex was more evident in control rats than that in hypothyroid rats from P17 to P30. Though not influenced by hypothyroidism, there were several regions of the brain in which ***ZAKI*** - ***4*** mRNA was strongly expressed. These regions were the mitral ***cell*** layer of the olfactory bulb, the substantia nigra, and the hippocampus, where calcineurin is also abundantly expressed. Therefore, it may be hypothesized that ***ZAKI*** - ***4*** plays an important role in the development and ***function*** of the brain by ***modulating*** calcineurin ***function*** ; and decrease in ***ZAKI*** - ***4*** mRNA expression in the specific brain areas may explain, in some parts, the mechanism of abnormal brain development by hypothyroidism.

L10 ANSWER 7 OF 15 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 2001354393 MEDLINE
DOCUMENT NUMBER: 21189752 PubMed ID: 11294245
TITLE: Cysteine string protein expression in mammary epithelial cells.
AUTHOR: Gleave T L; Beechey R B; Burgoyne R D
CORPORATE SOURCE: The Physiological Laboratory, University of Liverpool, UK.
SOURCE: PFLUGERS ARCHIV. EUROPEAN JOURNAL OF PHYSIOLOGY, (2001 Feb) 441 (5) 639-49.
Journal code: 0154720. ISSN: 0031-6768.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200106
ENTRY DATE: Entered STN: 20010625
Last Updated on STN: 20010625
Entered Medline: 20010621

AB Cysteine string protein (Csp) is a secretory vesicle protein previously demonstrated to be required for Ca2+-regulated exocytosis in neurons and endocrine ***cells*** . It has been suggested to ***function*** by regulating voltage-gated Ca2+ channels or, alternatively, to have a more direct effect on the regulated exocytotic machinery. Here we demonstrate the expression of Csp in mammary epithelial ***cells*** and in the KIM-2 mammary ***cell*** line. In KIM-2 ***cells*** , Csp was found to be associated with a population of small vesicles and showed partial co-distribution with the vesicle protein cellubrevin. KIM-2 ***cells*** do not express detectable levels of voltage-gated Ca2+ channels, ruling these out as a site of action. Using the release of transfected growth hormone (GH) as an assay of secretion, we found that GH is secreted in an exclusively constitutive manner from KIM-2 ***cells*** . Overexpression of ***Csp1*** ***inhibits*** regulated exocytosis in other ***cell*** types but has no effect on constitutive GH release by KIM-2 ***cells*** . These results suggest that Csp does not have a major ***function*** in constitutive exocytosis.

L10 ANSWER 8 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2001:471828 BIOSIS
DOCUMENT NUMBER: PREV200100471828
TITLE: Chronic overexpression of the calcineurin inhibitory gene DSCR1 is associated with Alzheimer's disease.
AUTHOR(S): Ermak, G. (1); Morgan, T. (1); Davies, K. J. A. (1)
CORPORATE SOURCE: (1) Gerontology Center, USC, Los Angeles, CA USA
SOURCE: Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 251. print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San Diego, California, USA November 10-15,

2001
ISSN: 0190-52[illegible].
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The ***DSCR1*** gene was independently discovered as a resident of the "Down Syndrome Candidate Region," and as an "Adaptive Response" shock or stress gene that is transiently induced during oxidative stress. Recently the ***DSCR1*** gene product was discovered to be an ***inhibitor*** of the serine/threonine phosphatase, calcineurin and its signaling pathways. We found significant expression of ***DSCR1*** in brain, and within the brain ***DSCR1*** is predominantly expressed in neurons. Based on this we hypothesized that ***DSCR1*** might be involved in the development of Alzheimer's disease. To address this question we compared ***DSCR1*** mRNA expression in post mortem brain samples from Alzheimer's disease patients and individuals who had died with no Alzheimer's diagnosis. We found that ***DSCR1*** mRNA levels were about twice as high in age-matched Alzheimer's patients as in controls. ***DSCR1*** mRNA levels were actually three times higher in patients with extensive neurofibrillary tangles (a hallmark of Alzheimer's disease) than in controls. There was no correlation between patient age and ***DSCR1*** mRNA levels. Using a ***cell*** culture model we discovered that the amyloid abeta1-42 peptide, which is a major component of senile plaques in Alzheimer's, can directly induce increased expression of ***DSCR1*** . Our findings associate ***DSCR1*** with such major hallmarks of Alzheimer's disease as amyloid protein, senile plaques, and neurofibrillary tangles. It is possible that abeta may chronically induce ***DSCR1*** which ***inhibits*** the serine/threonine phosphatase ***activity*** of calcineurin, causes tau hyperphosphorylation and formation of neurofibrillary tangles, and promotes Alzheimer's disease.

L10 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 5
ACCESSION NUMBER: 2002:294896 CAPLUS
DOCUMENT NUMBER: 137:273872
TITLE: Calcineurin-mediated regulation of ZAKI-4 gene expression in osteoblast-like ROS17/2.8 cells
AUTHOR(S): Cao, Xia; Kambe, Fukushi; Miyazaki, Takashi; Ohmori, Sachiko; Seo, Hisao
CORPORATE SOURCE: Department of Endocrinology and Metabolism Division of Molecular and Cellular Adaptation Research Institute of Environmental Medicine, Nagoya University, Nagoya, 464-8601, Japan
SOURCE: Environmental Medicine (2001), 45(1), 23-25
CODEN: ENMEE9; ISSN: 0287-0517
PUBLISHER: Nagoya University, Research Institute of Environmental Medicine
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors previously identified ***ZAKI*** - ***4*** as a thyroid hormone-responsive gene in primary cultured human skin fibroblasts. Recently it has been shown that the gene belongs to the ***DSCR1*** (Down's syndrome crit. region 1) gene family since the products of all the members possess a conserved motif which interacts with the catalytic A subunit of calcineurin and ***inhibits*** its ***function*** . In this report the authors studied whether ***ZAKI*** - ***4*** gene is expressed in osteoblast-like ROS17/2.8 ***cells*** and whether ***activation*** of calcineurin affects its expression. A treatment with high calcium (10 mM) and a calcium ionophore A23187 (2 .mu.M) resulted in an increase in ***ZAKI*** - ***4*** mRNA expression. This calcium and ionophore-mediated increase in mRNA was ***inhibited*** by pretreatment with cyclosporin A, an ***inhibitor*** of calcineurin. This suggests that the ***activation*** of calcineurin by an increase in intracellular calcium upregulates the expression of ***ZAKI*** - ***4*** gene and it ***functions*** as an endogenous feedback ***inhibitor*** of calcineurin in osteoblasts.
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 10 OF 15 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 2000187590 MEDLINE
DOCUMENT NUMBER: 20187590 PubMed ID: 10722714
TITLE: A protein encoded within the Down syndrome critical region is enriched in striated muscles and inhibits calcineurin signaling.
AUTHOR: Rothermel B; Vega R B; Yang J; Wu H; Bassel-Duby R; Williams R S
CORPORATE SOURCE: Departments of Internal Medicine and Molecular Biology,

University of Texas Southwestern Medical Center, Dallas, Texas 75390-8573, USA.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2000 Mar 24) 275 (12) 8719-25.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200004
ENTRY DATE: Entered STN: 20000505
Last Updated on STN: 20000505
Entered Medline: 20000427

AB Here we describe a small family of proteins, termed MCIP1 and MCIP2 (for myocyte-enriched calcineurin interacting protein), that are expressed most abundantly in striated muscles and that form a physical complex with calcineurin A. MCIP1 is encoded by ***DSCR1*** , a gene located in the Down syndrome critical region. Expression of the MCIP family of proteins is up-regulated during muscle differentiation, and their forced overexpression ***inhibits*** calcineurin signaling to a muscle-specific target gene in a myocyte ***cell*** background. Binding of MCIP1 to calcineurin A requires sequence motifs that resemble calcineurin interacting domains found in NFAT proteins. The ***inhibitory*** action of MCIP1 involves a direct association with the catalytic domain of calcineurin, rather than interference with the ***function*** of downstream components of the calcineurin signaling pathway. The interaction between MCIP proteins and calcineurin may ***modulate*** calcineurin-dependent pathways that control hypertrophic growth and selective programs of gene expression in striated muscles.

L10 ANSWER 11 OF 15 MEDLINE on STN DUPLICATE 7
ACCESSION NUMBER: 2000386788 MEDLINE
DOCUMENT NUMBER: 20347037 PubMed ID: 10887154
TITLE: A conserved family of calcineurin regulators.
AUTHOR: Kingsbury T J; Cunningham K W
CORPORATE SOURCE: Department of Biology, Johns Hopkins University, Baltimore, MD 21218, USA.
CONTRACT NUMBER: GM53082 (NIGMS)
SOURCE: GENES AND DEVELOPMENT, (2000 Jul 1) 14 (13) 1595-604.
Journal code: 8711660. ISSN: 0890-9369.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200008
ENTRY DATE: Entered STN: 20000818
Last Updated on STN: 20000818
Entered Medline: 20000804

AB The protein phosphatase calcineurin mediates many cellular responses to calcium signals. Using a genetic screen in yeast, we identified a new family of proteins conserved in fungi and animals that ***inhibit*** calcineurin ***function*** when overexpressed. Overexpression of the yeast protein Rcn1p or the human homologs ***DSCR1*** or ***ZAKI*** - ***4*** ***inhibited*** two independent ***functions*** of calcineurin in yeast: The ***activation*** of the transcription factor Tcn1p and the ***inhibition*** of the H(+)/Ca(2+) exchanger Vcx1p. Purified recombinant Rcn1p and ***DSCR1*** bound calcineurin in vitro and ***inhibited*** its protein phosphatase ***activity*** . Signaling via calmodulin, calcineurin, and Tcn1p induced Rcn1p expression, suggesting that Rcn1p operates as an endogenous feedback ***inhibitor*** of calcineurin. Surprisingly, rcn1 null mutants exhibited phenotypes similar to those of Rcn1p-overexpressing ***cells*** . This effect may be due to lower expression of calcineurin in rcn1 mutants during signaling conditions. Thus, Rcn1p levels may fine-tune calcineurin signaling in yeast. The structural and functional conservation between Rcn1p and ***DSCR1*** suggests that the mammalian Rcn1p-related proteins, termed ***calcipressins*** , will ***modulate*** calcineurin signaling in humans and potentially contribute to disorders such as Down Syndrome.

L10 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 8
ACCESSION NUMBER: 2001:289552 CAPLUS
DOCUMENT NUMBER: 135:317157
TITLE: Preparation of antibody that commonly recognizes ZAKI-4 .alpha. and .beta. of human, rat and mouse
AUTHOR(S): Hoshino, Shin; Kambe, Fukushi; Kanou, Yasuhiko; Seo, Hisao; Murata, Yoshiharu
CORPORATE SOURCE: Department of Teratology and Genetics, Nagoya

SOURCE: Universi[redacted] Nagoya, 464-8601, Japan
Environm[redacted]tal Medicine (2000), 44(2), 113[redacted]16
CODEN: ENMEE9; ISSN: 0287-0517
PUBLISHER: Nagoya University, Research Institute of Environmental Medicine
DOCUMENT TYPE: Journal
LANGUAGE: English
AB ***ZAKI*** - ***4*** has been identified as a thyroid hormone-responsive gene from cultured human skin fibroblasts. Recently, it has been reported that overexpressed ***ZAKI*** - ***4*** or DSCR-1 (a product of a gene located in the Down Syndrome Crit. Region) ***inhibits*** the calcineurin ***function*** by binding to the catalytic domain of calcineurin A subunit. Therefore, it has been hypothesized that ***ZAKI*** - ***4*** plays a physiol. role by ***inhibiting*** calcineurin ***activities*** . To prove that hypothesis it should be detd. whether ***ZAKI*** - ***4*** is expressed in calcineurin-expressing ***cells*** . For this purpose we have planned to raise a specific antibody against ***ZAKI*** - ***4*** . A polypeptide that is conserved in two ***ZAKI*** - ***4*** isoforms (.alpha. and .beta.) but not in DSCR-1 was used for immunization. Dot blot anal. using the antiserum showed that the antibody titer became detectable 9 wk after immunization and increased at 12 wk. By Western blot anal., a band at about 36 kDa was detected in the mouse brain and heart but not in the liver. The neutralization of this antiserum with the polypeptide used for immunization resulted in reduced staining of the 36 kDa band, thus indicating that the anti-serum prepd. in the present expt. can recognize ***ZAKI*** - ***4*** protein.
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 13 OF 15 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 1999212059 MEDLINE
DOCUMENT NUMBER: 99212059 PubMed ID: 10194413
TITLE: Mutational analysis of cysteine-string protein function in insulin exocytosis.
AUTHOR: Zhang H; Kelley W L; Chamberlain L H; Burgoyne R D; Lang J
CORPORATE SOURCE: Division de Biochimie Clinique, Departement de Medecine Interne, and Departement de Biochemie Medicale, Centre Medicale Universitaire, CH 1211 Geneve 4, Switzerland.
SOURCE: JOURNAL OF CELL SCIENCE, (1999 May) 112 (Pt 9) 1345-51. Journal code: 0052457. ISSN: 0021-9533.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199907
ENTRY DATE: Entered STN: 19990715
Last Updated on STN: 19990715
Entered Medline: 19990707
AB Cysteine-string proteins (Csps) are vesicle proteins involved in neurotransmission. They contain at least four domains: an N-terminal J-domain which can interact with the chaperone Hsc70, an adjacent linker region, the defining cysteine rich domain and a variable C terminus. As the relevance of these domains for the ***function*** of Csps in exocytosis is unknown, we have performed a mutational analysis of Csp domains using insulin release by large dense core vesicles (LDCVs) as a model of regulated exocytosis. All mutants were apparently palmitoylated and their subcellular distribution was similar to endogenous Csp. Point mutations within the highly conserved HPD motif of the J-domain abolished ***activation*** of Hsc70. However, these mutations altered the effect of Csp on exocytosis only after additional truncation of the extreme C terminus as found in the Csp splice variant ***Csp2*** . Furthermore, the strikingly conserved linker region adjacent to the J-domain was important for Csp ***function*** in exocytosis, but not for the ***activation*** of Hsc70 ATPase. The effects of Csp wild-type or mutants were preserved in permeabilized ***cells*** excluding an effect on transmembrane ion fluxes. These observations demonstrate a functional difference between the two isoforms and suggest a role for the J-domain co-chaperone ***function*** as well as for the newly defined linker region in LDCV exocytosis.

L10 ANSWER 14 OF 15 MEDLINE on STN DUPLICATE 10
ACCESSION NUMBER: 2000014911 MEDLINE
DOCUMENT NUMBER: 20014911 PubMed ID: 10545449
TITLE: Fission yeast mutants that alleviate transcriptional silencing in centromeric flanking repeats and disrupt chromosome segregation.

AUTHOR: Ekwall K; Cra[redacted]ton G; Allshire R C
CORPORATE SOURCE: Medical Rese[redacted]h Council Human Genetics Unit, [redacted]stern General Hospital, Edinburgh EH4 2XU, Scotland.
SOURCE: GENETICS, (1999 Nov) 153 (3) 1153-69.
Journal code: 0374636. ISSN: 0016-6731.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199912
ENTRY DATE: Entered STN: 20000113
Last Updated on STN: 20000113
Entered Medline: 19991217

AB In the fission yeast Schizosaccharomyces pombe genes are transcriptionally silenced when placed within centromeres, within or close to the silent mating-type loci or adjacent to telomeres. Factors required to maintain mating-type silencing also affect centromeric silencing and chromosome segregation. We isolated mutations that alleviate repression of marker genes in the inverted repeats flanking the central core of centromere I. Mutations ***csp1*** to 13 (centromere: ***suppressor*** of position effect) defined 12 loci. Ten of the csp mutants have no effect on mat2/3 or telomere silencing. All csp mutants allow some expression of genes in the centromeric flanking repeat, but expression in the central core is undetectable. Consistent with defective centromere structure and ***function*** , chromosome loss rates are elevated in all csp mutants. Mutants ***csp1*** to 6 are temperature-sensitive lethal and csp3 and csp6 ***cells*** are defective in mitosis at 36 degrees. csp7 to 13 display a high incidence of lagging chromosomes on late anaphase spindles. Thus, by screening for mutations that disrupt silencing in the flanking region of a fission yeast centromere a novel collection of mutants affecting centromere architecture and chromosome segregation has been isolated.

L10 ANSWER 15 OF 15 MEDLINE on STN DUPLICATE 11
ACCESSION NUMBER: 97220397 MEDLINE
DOCUMENT NUMBER: 97220397 PubMed ID: 9148760
TITLE: Activation of the ATPase activity of heat-shock proteins Hsc70/Hsp70 by cysteine-string protein.
AUTHOR: Chamberlain L H; Burgoyne R D
CORPORATE SOURCE: The Physiological Laboratory, University of Liverpool, Crown Street, Liverpool L69 3BX, UK.
SOURCE: BIOCHEMICAL JOURNAL, (1997 Mar 15) 322 (Pt 3) 853-8.
Journal code: 2984726R. ISSN: 0264-6021.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199705
ENTRY DATE: Entered STN: 19970523
Last Updated on STN: 19970523
Entered Medline: 19970509

AB DnaJ proteins are characterized by a 'J' domain which is homologous to a region of the Escherichia coli protein DnaJ. DnaJ has been shown to interact with the chaperone protein DnaK, and a number of eukaryotic DnaJ-like proteins have been found to interact with the 70 kDa heat-shock protein/70 kDa heat-shock cognate protein (Hsp70/Hsc70), the eukaryotic homologues of DnaK. Cysteine-string proteins (Csps) are believed to ***function*** in calcium-stimulated exocytosis and in this paper we describe a specific ATP-dependent interaction between a Csp (***Csp1***) and Hsc70/Hsp70. We also show that ***Csp1*** can stimulate the ATPase ***activity*** of both Hsc70 and Hsp70 several-fold. Furthermore, we demonstrate that ***Csp2*** , a Csp variant found in adrenal chromaffin ***cells*** , can enhance the ATPase ***activity*** of Hsc70 to a similar extent as ***Csp1*** , whereas Csp(137-198), a truncated protein lacking the 'J' domain of ***Csp1*** is unable to stimulate the ATPase ***activity*** of Hsc70. This suggests that the ***functions*** of ***Csp1*** and ***Csp2*** must differ in some aspect other than interaction with Hsc70. This study is also important from a general view of DnaJ/Hsc70 interactions, as Csps lack a G/F-rich region which has been suggested to be essential for ***activation*** of the ATPase ***activity*** of DnaK by DnaJ. Thus, this work would imply that a G/F-rich region is not an essential feature of DnaJ proteins for stimulation of the ATPase ***activity*** of Hsp70 proteins.

=> d his

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     (FILE 'HOME' ENTERED AT 11:4[redacted]48 ON 15 AUG 2003)

     FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT
     11:50:15 ON 15 AUG 2003
L1            24 S CALCIPRESSIN
L2           693 S CSP1 OR CSP2 OR DSCR1 OR ADPT78 OR ZAKI-4
L3           695 S L1 OR L2
L4             0 S L3 (P) (SCREEN? ASSAY)
L5            20 S L3 (P) ASSAY
L6             8 S L5 (P) (MODULAT? OR INHIBIT? OR SUPPRESS? OR ACTIVAT?)
L7             2 DUPLICATE REMOVE L6 (6 DUPLICATES REMOVED)
L8            85 S L3 (P) CELL (P) (FUNCTION OR ACTIVITY)
L9            48 S L8 (P) (MODULAT? OR INHIBIT? OR SUPPRESS? OR ACTIVAT?)
L10           15 DUPLICATE REMOVE L9 (33 DUPLICATES REMOVED)

=> s antibody (p) l8
L11           12 ANTIBODY (P) L8

=> duplicate remove l11
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
PROCESSING COMPLETED FOR L11
L12            3 DUPLICATE REMOVE L11 (9 DUPLICATES REMOVED)

=> d l12 1-3 ibib abs

L12  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2003 ACS on STN  DUPLICATE 1
ACCESSION NUMBER:         2001:289552  CAPLUS
DOCUMENT NUMBER:          135:317157
TITLE:                    Preparation of antibody that commonly recognizes
                          ZAKI-4 .alpha. and .beta. of human, rat and mouse
AUTHOR(S):                Hoshino, Shin; Kambe, Fukushi; Kanou, Yasuhiko; Seo,
                          Hisao; Murata, Yoshiharu
CORPORATE SOURCE:         Department of Teratology and Genetics, Nagoya
                          University, Nagoya, 464-8601, Japan
SOURCE:                   Environmental Medicine (2000), 44(2), 113-116
                          CODEN: ENMEE9; ISSN: 0287-0517
PUBLISHER:                Nagoya University, Research Institute of Environmental
                          Medicine
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB     ***ZAKI***  -  ***4***  has been identified as a thyroid
     hormone-responsive gene from cultured human skin fibroblasts.  Recently,
     it has been reported that overexpressed  ***ZAKI***  -  ***4***  or
     DSCR-1 (a product of a gene located in the Down Syndrome Crit. Region)
     inhibits the calcineurin  ***function***  by binding to the catalytic
     domain of calcineurin A subunit.  Therefore, it has been hypothesized that
       ***ZAKI***  -  ***4***  plays a physiol. role by inhibiting calcineurin
       ***activities***  .  To prove that hypothesis it should be detd. whether
       ***ZAKI***  -  ***4***  is expressed in calcineurin-expressing
       ***cells***  .  For this purpose we have planned to raise a specific
       ***antibody***  against  ***ZAKI***  -  ***4***  .  A polypeptide that
     is conserved in two  ***ZAKI***  -  ***4***  isoforms (.alpha. and
     .beta.) but not in DSCR-1 was used for immunization.  Dot blot anal. using
     the antiserum showed that the  ***antibody***  titer became detectable 9
     wk after immunization and increased at 12 wk.  By Western blot anal., a
     band at about 36 kDa was detected in the mouse brain and heart but not in
     the liver.  The neutralization of this antiserum with the polypeptide used
     for immunization resulted in reduced staining of the 36 kDa band, thus
     indicating that the anti-serum prepd. in the present expt. can recognize
       ***ZAKI***  -  ***4***  protein.
REFERENCE COUNT:          8     THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12  ANSWER 2 OF 3     MEDLINE on STN                    DUPLICATE 2
ACCESSION NUMBER:   1998393545     MEDLINE
DOCUMENT NUMBER:    98393545   PubMed ID: 9724640
TITLE:              Cysteine string protein (CSP) is an insulin secretory
                    granule-associated protein regulating beta-cell exocytosis.
AUTHOR:             Brown H; Larsson O; Branstrom R; Yang S N; Leibiger B;
                    Leibiger I; Fried G; Moede T; Deeney J T; Brown G R;
                    Jacobsson G; Rhodes C J; Braun J E; Scheller R H; Corkey B
                    E; Berggren P O; Meister B
CORPORATE SOURCE:   Department of Neuroscience, The Berzelius Laboratory,
                    Karolinska Institute, Stockholm, Sweden.
SOURCE:             EMBO JOURNAL, (1998 Sep 1) 17 (17) 5048-58.
```

Journal code: 208664. ISSN: 0261-4189.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199811
ENTRY DATE: Entered STN: 19990106
Last Updated on STN: 19990106
Entered Medline: 19981123

AB Cysteine string proteins (CSPs) are novel synaptic vesicle-associated protein components characterized by an N-terminal J-domain and a central palmitoylated string of cysteine residues. The cellular localization and functional role of CSP was studied in pancreatic endocrine ***cells*** . In situ hybridization and RT-PCR analysis demonstrated CSP mRNA expression in insulin-producing ***cells*** . ***CSP1*** mRNA was present in pancreatic islets; both ***CSP1*** and ***CSP2*** mRNAs were seen in insulin-secreting ***cell*** lines. Punctate CSP-like immunoreactivity (CSP-LI) was demonstrated in most islets of Langerhans ***cells*** , acinar ***cells*** and nerve fibers of the rat pancreas. Ultrastructural analysis showed CSP-LI in close association with membranes of secretory granules of ***cells*** in the endo- and exocrine pancreas. Subcellular fractionation of insulinoma ***cells*** showed ***CSP1*** (34/36 kDa) in granular fractions; the membrane and cytosol fractions contained predominantly ***CSP2*** (27 kDa). The fractions also contained proteins of 72 and 70 kDa, presumably CSP dimers. ***CSP1*** overexpression in INS-1 ***cells*** or intracellular administration of CSP ***antibodies*** into mouse ob/ob beta- ***cells*** did not affect voltage-dependent Ca2+-channel ***activity*** . Amperometric measurements showed a significant decrease in insulin exocytosis in individual INS-1 ***cells*** after ***CSP1*** overexpression. We conclude that CSP is associated with insulin secretory granules and that CSP participates in the molecular regulation of insulin exocytosis by mechanisms not involving changes in the ***activity*** of voltage-gated Ca2+-channels.

L12 ANSWER 3 OF 3 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 93023863 MEDLINE
DOCUMENT NUMBER: 93023863 PubMed ID: 1406274
TITLE: Cloning and nucleotide sequence of the csp1 gene encoding PS1, one of the two major secreted proteins of Corynebacterium glutamicum: the deduced N-terminal region of PS1 is similar to the Mycobacterium antigen 85 complex.
AUTHOR: Joliff G; Mathieu L; Hahn V; Bayan N; Duchiron F; Renaud M; Schechter E; Leblon G
CORPORATE SOURCE: Centre Orsan de Recherche en Biotechnologie, Courtaboeuf, France.
SOURCE: MOLECULAR MICROBIOLOGY, (1992 Aug) 6 (16) 2349-62.
Journal code: 8712028. ISSN: 0950-382X.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-X66078
ENTRY MONTH: 199210
ENTRY DATE: Entered STN: 19930122
Last Updated on STN: 19950206
Entered Medline: 19921029

AB Two proteins, PS1 and PS2, were detected in the culture medium of Corynebacterium glutamicum and are the major proteins secreted by this bacterium. No enzymatic ***activity*** was identified for either of the two proteins. Immunologically cross-reacting proteins were found in a variety of C. glutamicum strains but not in the coryneform Arthrobacter aureus. The gene encoding PS1, ***csp1*** , was cloned in lambda gt11 using polyclonal ***antibodies*** raised against PS1 to screen for producing clones. The ***csp1*** gene was expressed in Escherichia coli, presumably from its own promoter, and directed the synthesis of two proteins recognized by anti-PS1 ***antibodies*** . The major protein band, of lower M(r), was detected in the periplasmic fraction. It had the same M(r) as the PS1 protein band detected in the supernatant of C. glutamicum cultures and presumably corresponds to the mature form of PS1. The minor protein band appears to be the precursor form of PS1. The nucleotide sequence of the ***csp1*** gene was determined and contained an open reading frame encoding a polypeptide with a calculated molecular weight of 70,874, with a putative signal peptide with a molecular weight of 4411. This is consistent with the M(r) determined for PS1 from C. glutamicum culture supernatant and E. coli whole- ***cell*** extracts. The NH2-half of the deduced amino acid is similar (about 33%

identical residues and 52% including similar residues) to the secreted antigen 85 protein complex of Mycobacterium. The ***csp1*** gene in C. glutamicum was disrupted without any apparent effect on growth or viability.

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=> d his

     (FILE 'HOME' ENTERED AT 11:49:48 ON 15 AUG 2003)

     FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT
     11:50:15 ON 15 AUG 2003
L1            24 S CALCIPRESSIN
L2           693 S CSP1 OR CSP2 OR DSCR1 OR ADPT78 OR ZAKI-4
L3           695 S L1 OR L2
L4             0 S L3 (P) (SCREEN? ASSAY)
L5            20 S L3 (P) ASSAY
L6             8 S L5 (P) (MODULAT? OR INHIBIT? OR SUPPRESS? OR ACTIVAT?)
L7             2 DUPLICATE REMOVE L6 (6 DUPLICATES REMOVED)
L8            85 S L3 (P) CELL (P) (FUNCTION OR ACTIVITY)
L9            48 S L8 (P) (MODULAT? OR INHIBIT? OR SUPPRESS? OR ACTIVAT?)
L10           15 DUPLICATE REMOVE L9 (33 DUPLICATES REMOVED)
L11           12 S ANTIBODY (P) L8
L12            3 DUPLICATE REMOVE L11 (9 DUPLICATES REMOVED)

=> s mckeon frank/au
L13           99 MCKEON FRANK/AU

=> s kayako kimbara/au
L14            0 KAYAKO KIMBARA/AU

=> s ryeom sandy/au
L15            0 RYEOM SANDY/AU

=> s l13 and l3
L16            0 L13 AND L3

=> d his

     (FILE 'HOME' ENTERED AT 11:49:48 ON 15 AUG 2003)

     FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT
     11:50:15 ON 15 AUG 2003
L1            24 S CALCIPRESSIN
L2           693 S CSP1 OR CSP2 OR DSCR1 OR ADPT78 OR ZAKI-4
L3           695 S L1 OR L2
L4             0 S L3 (P) (SCREEN? ASSAY)
L5            20 S L3 (P) ASSAY
L6             8 S L5 (P) (MODULAT? OR INHIBIT? OR SUPPRESS? OR ACTIVAT?)
L7             2 DUPLICATE REMOVE L6 (6 DUPLICATES REMOVED)
L8            85 S L3 (P) CELL (P) (FUNCTION OR ACTIVITY)
L9            48 S L8 (P) (MODULAT? OR INHIBIT? OR SUPPRESS? OR ACTIVAT?)
L10           15 DUPLICATE REMOVE L9 (33 DUPLICATES REMOVED)
L11           12 S ANTIBODY (P) L8
L12            3 DUPLICATE REMOVE L11 (9 DUPLICATES REMOVED)
L13           99 S MCKEON FRANK/AU
L14            0 S KAYAKO KIMBARA/AU
L15            0 S RYEOM SANDY/AU
L16            0 S L13 AND L3

=> logy
LOGY IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> log y
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    78.72      78.93

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -3.26      -3.26

STN INTERNATIONAL LOGOFF AT 12:00:03 ON 15 AUG 2003
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